



WA 3019  
18A  
11/2/07

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**REGION 10**  
1200 Sixth Avenue  
Seattle, Washington 98101

2 November 2007

**MEMORANDUM**

**TO:** Jan Palumbo, RCRA Project Manager

**FROM:** René Fuentes, Hydrogeologist  
Office of Environmental Assessment

**SUBJECT:** J. H. Baxter, Arlington, WA Draft Remedial Action Pilot Study Work Plan & Draft Pilot Study Performance Monitoring Plan, both dated September 2007.

I have reviewed these draft documents, as you requested, and have the following comments on them. As we have discussed my biggest concern at this point is that the monitoring wells proposed, and that the monitoring plan may not provide us with sufficient data to verify that the system is working as proposed by the facility.

**GENERAL COMMENTS**

In general the document presents a design which is consistent with the discussions that we have had in our recent meetings. However, since the documents came with a fast turn-around request to get to construction prior to the winter season, there were some concerns with monitoring plan that had to be resolved, which led to having a short meeting with the facility during the same period of time that these comments were being prepared. The plan indicated that the wells would be drilled in October, which would not allow much time to discuss other options and could have presented problems if installed where proposed. During this process of review EPA has had meetings and calls that have resolved some of these issues, but these comments are being submitted to you based on what is presented in the documents, to provide the basis for EPA comments and approval of revised plans.

Overall I think that the proposal is sound and that it has a good chance of being successful as proposed. I approve of going on with the proposed pilot test of a recirculation and treatment cell system (labeled Aerotron by the facility), and have comments to address some issues with the plans as submitted.

The greatest concerns remain with the conceptual design and modeling, which still are a bit hard to fully understand since there are no calculations to support the monitoring locations, and it is hard to make assumptions as to the efficiency without any calculations to define what the expected mounding of the water table will be, or what the radial influence of the recharge zone will be. This was discussed yesterday with the facility and both parties understand that changes would be made based on the data obtained during the startup. The plan as proposed in this

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document could create large uncertainty on what the monitoring results produce. For example, are the results due to the wells being too far away from recharge area? Are the downgradient wells also too far apart? Do we have enough wells and enough multiple depth locations? And do we have sufficient monitoring without transducers in place? Also, we may want to request that a tracer test with a non-degradable salt, such as bromide, be used to document that the system has proper capture and we can quantify the actual capture efficiency without the degradation factor involved in the data interpretation. EPA should reserve the option to require additional wells if the data does not provide convincing evidence of contaminant plume capture and treatment.

These comments on the monitoring apply to both documents –the Draft Work Plan and the Draft Monitoring Plan. It seems that both of these documents are interrelated, and it is difficult to separate all the comments for one document or the other. Where it was possible I have attempted to refer to the document where the issue appears, but the goal is to have a consistent plan, so any comment that carries over to the other document should be corrected in both documents if necessary for a consistent overall plan.

### SPECIFIC COMMENTS

1. Section 3.2.1 In Situ Bioremediation Design Approach. Page 16 (and also page 18). There should be more detail on how the rate of 40 gpm was arrived at in the recirculation design. It is not clear what the assumptions were, and whether they accounted for the additional 50 gallons recirculation. I assume it is related to the modeling results shown in figure 2. It is not clear how the additional recharged water is accounted for in the recirculation model, but as long as the system is adjusted based on actual field data the plan should not be a problem to allow field implementation.
2. Section 3.2.1 In Situ Bioremediation Design Approach. Page 16. Not clear how the recharge will impact the radial flow from the mounding area under the infiltration gallery. While the text states that the details of the modeling are explained in Appendix A, there is very little there that is not related to the biodegradation calculations. From meeting yesterday we understand additional monitoring wells will be installed and more frequent water level measurements will be taken during the start-up period.
3. Section 3.2.1 In Situ Bioremediation Design Approach. Page 16. There may be a need to use a conservative tracer, such as bromide, to determine what the actual capture efficiency of the extraction system is, and to determine what mass bypasses the extraction system and is simply not noticed due to the degradation or dilution and mixing of the site contamination. This contingency should be discussed in the final plan.
4. Page 18. Why is it that extraction system has to be outside of the City of Arlington right-of-way? Does that also affect any other equipment at the facility? Please explain in revised report.
5. Section 3.4 LNAPL Recovery Wells. This section does not discuss the usefulness or effectiveness of a passive sorbent sock system. In addition, the discussion does not present the overall efficiency of the sock system in relation to the total number of wells with socks installed as the recovery system. However, it appears that the more wells and more socks present, together with the changing schedule of sock replacement would make a great difference in the overall "sock extraction efficiency". This is a significant issue since the longer the source area is left to impact the ground water, and leaching dissolved

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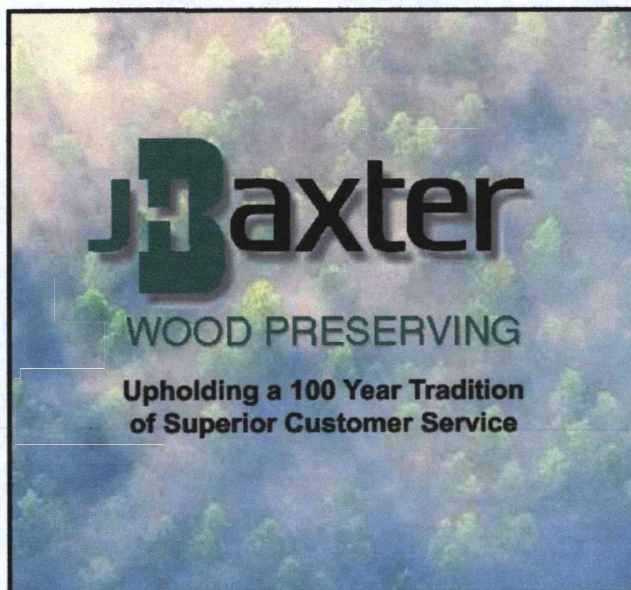
- contaminants, the longer it will take to keep the recirculation unit running. Please provide more detail on expected remedial results from the proposed system.
6. Page 23 and Appendix B. Monitoring wells. It would help to have a graphical conceptual model of how the extraction and re-infiltration system is expected to work, where the monitoring system will monitor the water, and how it will do that in three dimensions. If we had a cross-section we could illustrate the overall gradient and the mounding from the recharge area, and attempt to explain whether there should be any impact at 100 feet cross-wise and down gradient of the recharge area.
  7. Page 23 and Appendix B. Monitoring Wells. In addition EPA needs to reserve its ability to require other wells at depth to monitor any downward flow paths developed by the recharge if questions come up based on the data developed from the monitoring system.
  8. Page 24. Estimated Cost. The report should attempt to provide some comparison over the life of the project to compare cost of this system with source removal and without source removal. The difference should be based on time that pumping and monitoring are required.
  9. Page 27. Section 5.1 Commissioning and Startup. There should be much more detail in well development methods, including field monitoring to document development. I suggest that the well development protocols be detailed – one suggested reference is this EPA Ground Water Forum Issue Paper, **April 1992**  
Monitoring Well Development Guidelines for Superfund Project Managers (PDF) . The key issue is that additional details should be provided on “well-development” in this report.
  10. Page 29. Operation Records. Need more details on the operation until system is working in a stable manner and we have some data.
  11. Page 29. Operations Monitoring. Need to document how and how often monitoring of ground water and any analytical or field data will be collected. In addition should give us some indication of how the data will be presented, what hydrographs will be provided, for what wells and how often.
  12. Page 29. Operations Monitoring. It is not clear what indicates replacement needs for the absorbent socks, and how that will be determined at the site. How often will the socks be checked to determine replacement needs?
  13. Page 30. Record Keeping and Reporting. The statement that general system operations will be included in monthly reports needs to be revised to have detailed information regularly during the start up period. That may be submitted as part of the monthly report or as a separate document at the same time. The issue is that details are needed from startup until we have system stable, and that EPA needs to have regular feedback as the system goes on line.
  14. Page 32. Biological Fouling of the Wells. There should be some estimate of the lifetime of the system; as discussed above, that needs to be done for cost estimating and deciding on the contamination source removal options.
  15. Page 33. Monitoring Plan. The following comments on the monitoring apply to both the Draft Work Plan document and the separate (but related) Draft Monitoring Plan document. It seems that both of these documents are interrelated, and it is difficult to separate comments (or have to repeat them to cover both documents).
  16. Drawing M-1 in Work Plan and Monitoring Plan. The facility consultants and EPA have now discussed, and agreed, in installing two additional shallow piezometers between the Infiltration Trench and wells SMW-3 and SMW-5. In addition, we agreed to move well

SMW-7 closer to RMW-2 in case the flows move towards the north past the extraction well system. The draft reports should be revised to show those changes.

17. Monitoring Report. Page 3 and Table PMP-1. It is unclear why the plan separates the monitoring wells and piezometers under different labels or categories. I expect that if we need to obtain water quality samples we will be able to do that from both the monitoring wells and the piezometers, so the different labels should NOT presume that there will be no water quality samples in some of those wells at any future time. I suggest that all the monitoring wells be called "monitoring wells" unless there is a documented, and well defined, need for the label of "piezometer". Since there are no differences in the wells other than diameter (2 inch vs. 4 inch), there does not seem to be any reason for the differentiation in the draft plans. Similarly, it is unclear why there is a need for the different well identification numbering systems proposed – that makes it more difficult to understand the difference in well labels in the maps or text in the future.
18. Monitoring Report Table PMP-1. The well screens of 20 feet are too long. Since we have had water level data for this site for a number of years, we should be able to limit the length of the screens to ten (10) feet to minimize the dilution of water samples. I understand that these may be 15 feet (if absolutely needed), but the reason for that should be carefully documented in the revised plan using the historical water elevation data. If there should be questions in the future due to the long screens, we may need to do multiple depth sampling using passive diffusion bag samples or some other multi-depth samplers; therefore, the goal for these new wells should be to obtain the most discrete type of ground water samples from the wells installed, without having to resort to different sampling methods to separated problems of dilution or other long-screen interferences.
19. Monitoring Report Table PMP-1. It is unclear why some of the wells are 4 inch in diameter, but from the locations it may be that they may be potential extraction wells. Please document the reason for the difference in the plans.
20. Monitoring Report. Page 4. The report suggests limited water level measurements, but after discussions with facility consultants we agreed that measurements will occur much more routinely (hourly?) during the first few days after start-up, until the system dynamics reach stability, and that these measurement intervals will be adjusted as necessary, and communicated to EPA in a timely manner. Based on that early data, we may be able to adjust the monitoring schedule to a less rigorous schedule if the water levels are stable, or if not we may need to install transducers as we discussed at the meeting with facility on November 1, 2007.
21. Monitoring Report. Page 8. Need to have monitoring reports and information much more routinely than "10 weeks following completion of the quarterly sampling event". I suggest that we need to have routine updates as the system starts (emails would work rather than full reports for these), and more communication should occur in the earlier stages of the system start up, decreasing as the system flows stabilize. I would expect that the project manager would be notified by phone in the case that there are unexpected problems with the system. Once we are done with the "start-up" period and the system is stable we can move into a more routine reporting schedule with more formal reports. This section should document what EPA should expect on those reports, similar to other sampling and remedial work projects that have already taken place and documented.

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18A

**Remedial Action Pilot Study Performance  
Monitoring Plan  
Stella-Jones (formerly J.H. Baxter & Co.) Wood Treating Facility  
Arlington, Washington**



Prepared for:  
**United States Environmental Protection Agency  
Region 10  
1200 Sixth Avenue  
Seattle, Washington 98101**

Prepared by:  
**J.H. Baxter Project Team  
P.O. Box 10797  
Eugene, Oregon 97440**

**September 2007**

**RECEIVED**  
**SEP 26 2007**  
Office of Air, Waste & Toxics



**Geomatrix PREMIER**  
ENVIRONMENTAL SERVICES, INC.

1 Nov 2007

J.H. Baxter - Pilot Plant Monitoring Meeting  
Approval of doing pilot test

Gary  
Steve  
Lueken  
Jan  
Kend

Well installation Nov 15 on of so.

System on 15 Jan 2008 planned (after water levels measured  
with system off and water quality sampling quarterly sampling)  
Feb. meeting after 6 weeks of so of system being on.

Added 2 piezometers. Moved one well (go to north?)  
(hourly? 2 hrs?)  
More well level measurements at first. More first week  
or two and then decide what is needed.  
Maybe transducers later if needed.

After meeting call to Jarrifer  
Agreed that CRIS is delayed because  
we approve of pilot test.

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## FIGURES

Figure 1	Site Vicinity Map
Figure 2	Site Plan
Figure 3	Existing Monitoring Wells
Figure 4	Monitoring and LNAPL Well Extraction Network

## ABBREVIATIONS

Arlington facility	Stella-Jones (formerly J.H. Baxter & Co.) wood treating facility in Arlington, Washington
AOC	Administrative Order on Consent
Baxter	J.H. Baxter & Co.
bgs	below ground surface
CLP	Contract laboratory procedure
CMS	Corrective Measures Study
EPA	U.S. Environmental Protection Agency
facility	Stella-Jones (formerly J.H. Baxter & Co.) wood treating facility in Arlington, Washington
Geomatrix	Geomatrix Consultants, Inc.
gpm	gallons per minute
LNAPL	light nonaqueous phase liquid
PAHs	polyaromatic hydrocarbons
PCP	pentachlorophenol
PMP	Performance Monitoring Plan
Premier	Premier Environmental Services, Inc.
QA/QC	quality assurance/quality control
SADMP	Sampling Analysis and Data Management Plan
SI	Site Investigation
site	Stella Jones (formerly J.H. Baxter & Co.) wood treating facility in Arlington, Washington
SVOCs	semivolatile organic compounds

## **REMEDIAL ACTION PILOT STUDY PERFORMANCE MONITORING PLAN**

Stella Jones (formerly J.H. Baxter & Co.) Wood Treating Facility  
Arlington, Washington

### **1.0 INTRODUCTION**

The J.H. Baxter Project Team, consisting of J.H. Baxter & Co. (Baxter), Premier Environmental Services, Inc. (Premier), and Geomatrix Consultants, Inc. (Geomatrix), has prepared this Remedial Action Pilot Test Performance Monitoring Plan (PMP) for the Stella-Jones (formerly Baxter's) Arlington, Washington, wood-treating facility (Arlington facility, facility, or site), located at 6520 188th Street NE (Figure 1).

The Remedial Action Pilot Study and associated PMP is considered part of the ongoing Corrective Measures Study (CMS), which is being implemented pursuant to Paragraph 53 of the United States Environmental Protection Agency (EPA) Administrative Order on Consent (AOC) dated April 30, 2001 (EPA, 2001). All CMS-related activities were conducted consistent with guidance provided by EPA in the Resource Conservation and Recovery Act (RCRA) Corrective Action Plan (Final), dated May 1994 (EPA, 1994), the Corrective Action Advance Notice of Proposed Rulemaking (EPA, 1996), and the AOC.

The companion document to this PMP is the Remedial Action Pilot Study Work Plan (Work Plan), being submitted to EPA separate from this document. The reader is referred to the Work Plan for details on the site background and environmental setting, as well as a description of the pilot study.

This PMP is intended to be implemented concurrent with initiation of the pilot study, which is planned to operate for a 12-month period. The results of the pilot study will be incorporated into the CMS and should lead to a determination of a final corrective measures for the site. Upon completion of the CMS and EPA determination of the final corrective measure, a revised monitoring plan will be prepared for review by EPA.

## 1.1 PURPOSE AND OBJECTIVES

The purpose of this PMP is to document the monitoring program that will be used to assess the effectiveness of the full-scale pilot study of an in situ bioremediation system in treating affected groundwater and passive wells for recovery of light, nonaqueous phase liquids (LNAPL). The design and operations plans for the pilot study are based on the proposed corrective measures alternative identified in the Corrective Measures Study (CMS) dated January 12, 2007 (Baxter, 2007), and on the results of the previously completed Site Investigation (SI) (Baxter, 2005a). Baxter's proposed alternative in the CMS is an in situ enhanced bioremediation recirculation system. Constituents of concern (COCs), the affected media, and the potential receptors and exposure pathways were identified in the SI for each area of the facility.

The objective of this performance monitoring plan is to evaluate the effectiveness of the enhanced bioremediation recirculation system during the pilot study. Four primary objectives for performance monitoring are listed as follows:

- Evaluate plume capture by the extraction wells
- Monitor groundwater elevations and chemical concentrations in and near the infiltration gallery
- Monitor the effect of the enhanced bioremediation and recirculation system on the plume mass and geometry
- Monitor chemical concentrations within the plume during the pilot test.

Section 3.0 describes the monitoring well network at the Site, and Section 4.0 presents the performance monitoring plan that will be followed pending completion of construction of the Pilot System. The performance monitoring quality assurance/quality control plan is referenced in Section 5.0. Section 6.0 summarizes the reports that will be submitted as part of performance monitoring.

## 3.0 MONITORING WELL NETWORK

Figure 3 shows the location of the existing site wells (M-1 through MW-4; BXS-1 through BXS-4; HCMW-5 through HCMW-8; and MW-14 through MW-18) that were installed as part

of earlier investigations. A total of 14 new monitoring wells or piezometers are planned (Figure 4) as follows:

- Three new monitoring wells (RMW-1 through RMW-3)
- Eight new shallow piezometers (SMW-1 through SMW-8)
- Three new deep piezometers (DMW-1 through DMW-3; paired with shallow monitoring wells or piezometers).

*why difference?  
Do not  
expect to  
sample?*

In addition to the 14 new wells and/or piezometers, seven new groundwater extraction wells (EW-1 through EW-7), and three new light nonaqueous phase liquid (LNAPL) extraction wells are planned as part of the pilot study (Figure 4). A tabular summary of construction details for the existing and planned wells is included as Table PMP-1.

The network of wells is designed to specifically monitor the performance of the enhanced bioremediation and recirculation system. In addition to the existing and new groundwater monitoring wells which are designed primarily for collecting chemical data, a number of piezometers are situated around the extraction wells to monitor groundwater elevations around the extraction wells and infiltration gallery for the pilot system. The piezometers are placed upgradient, cross gradient, and downgradient of a series of extraction wells (Figure 4). Water levels collected from the piezometers will be used to determine if the extraction system is capturing affected groundwater flowing from the Main Treating area (Figure 4) and to evaluate changes in horizontal and vertical gradients.

Three of the proposed piezometers will be installed to deeper depths, and will be paired with either an existing shallow monitoring well (MW-3/ DMW-2), or newly installed piezometers (DMW-1/ SMW-1 and SMW-6/DMW-3), as shown on Figure 4. Each well pair consists of a shallower well screened between approximately 30 and 40-50 feet below ground surface (bgs) to evaluate groundwater conditions in the upper portion of the aquifer, and a deeper well screened between 40-50 to 50-60 feet bgs, to evaluate groundwater conditions in the lower portion of the aquifer. Monitoring water levels at the two depth intervals allows for identification of potential downward gradients resulting from extracted water being placed into the infiltration gallery.

*monitor  
with  
transducer?*

Details of well construction are provided in the Work Plan (Baxter, 2007b). Field procedures used for well installation will be in accordance with the Site Investigation Work Plan (Baxter, 2003).

#### 4.0 PERFORMANCE MONITORING

This section describes the proposed performance monitoring program that will be implemented after installation of the pilot system. Performance monitoring will focus on determining whether the enhanced biodegradation and recirculation system can meet corrective action objectives outlined in the Draft Corrective Measures Study (Baxter 2007).

Section 4.1 describes how water level measurements will be recorded and evaluated to determine if the pilot system is providing adequate hydraulic control. Section 4.2 describes the groundwater quality monitoring that will be used to determine if the pilot system has controlled the release of constituents of concern (COCs), or if mobilization of COCs outside and in the vicinity of the extraction wells has occurred. Section 4.3 describes the LNAPL recovery monitoring that will be used to determine the effectiveness of the passive recovery system.

#### 4.1 PERFORMANCE MONITORING — WATER LEVEL MEASUREMENT

Water level monitoring is the primary determinant of whether the extraction wells are meeting the performance goals for hydraulic control of the groundwater plume. The following discussion clarifies how measurement of water levels determines how the extraction wells are performing.

The extraction network will behave ideally if it captures the groundwater plume, as well as extracted groundwater that recirculated by placement into the infiltration trench. Ideal behavior will be demonstrated if pumping in the extraction wells causes drawdown, and potential “mounding” from the infiltration trench is offset by the inward gradients to the extraction wells. If the extraction wells are not effective, the groundwater plume could expand and potentially flow around the extraction wells.

Water levels will be collected immediately before startup of the pilot system, then weekly in selected wells for a three-month period. After the three-month period, water level data will be collected monthly. The frequency of water level measurements are summarized below, and in Table PMP-2:

- **Prior to System Start:** All existing site wells.
- **Weekly during the first month:** All piezometers (SMW-1 through SMW-8; DMW-1 through DMW-3) and monitoring well MW-3. *daily? continuous?*
- **Every other week during the second and third months:** All piezometers (SMW-1 through SMW-8; DMW-1 through DMW-3) and monitoring well MW-3.
- **Monthly for the 12-month pilot study:** All site wells and piezometers.

Weekly and/or monthly water level monitoring of the wells shown in Figure 4 for the duration of the pilot study will be adequate to confirm performance of the extraction wells and infiltration trench and to detect failure with sufficient frequency to provide for mitigation, if appropriate.

## 4.2 PERFORMANCE MONITORING — WATER QUALITY MONITORING

Water quality monitoring during the performance monitoring period will consist of measuring general parameters and specific chemical analyses to determine if the system has reduced the concentrations of COCs downgradient of the extraction wells and minimized the extent of the groundwater plume. Section 4.2.1 describes the general parameter monitoring program, and Section 4.2.2 describes the chemical analyses that will be used to monitor the pilot system performance. Table PMP-2 provides a tabular summary of the proposed water quality monitoring program.

### 4.2.1 General Parameters

The conditional approval includes requirements for monitoring water quality as part of performance monitoring. The objective of water quality monitoring is to assess changes in groundwater chemistry downgradient of the extraction wells.

General water quality parameters will include pH, oxidation/reduction potential [ORP], dissolved oxygen, specific conductance, and temperature for all wells. General parameter sampling will be performed on all network wells (Figure 4) simultaneously with groundwater chemical sampling described below. This will provide water quality data for deep and shallow groundwater and will occur with a frequency sufficient to allow timely mitigation, if warranted. *?*

#### 4.2.2 Chemical Analyses

Table PMP-2 lists the wells that will be included in the chemical monitoring program. Chemical monitoring of key monitoring wells will be conducted quarterly, with additional data collected monthly during the initial months of the pilot test. For the purpose of this pilot study, some of the piezometers may be used to collect water samples for chemical analysis.

Pentachlorophenol (PCP) will be analyzed as the representative semi-volatile organic compound (SVOCs) in the groundwater samples. Additional analytes will be analyzed in key wells in accordance with the EPA-approved *Supplemental Dissolved phase Groundwater Monitoring Plan* (Baxter, 2005b). Additional analysis may be conducted as part of the pilot study to document groundwater conditions.

The *Supplemental Dissolved phase Groundwater Monitoring Plan* will continue to be implemented during the pilot study, and data from that monitoring program will be integrated with this PMP. A summary of sampling that will be conducted as part of this pilot study is summarized below:

- **Prior to Initiation of Pilot Study:** All SMW and DMW piezometers; BXS-1, MW-3, RMW-1, RMW-2, RMW-3 (this event may be combined with routine quarterly sampling as part of the *Supplemental Dissolved-phase Groundwater Monitoring Plan*).
- **One-Month after Initiation of Pilot Study:** All SMW and DMW piezometers; BXS-1, MW-3, RMW-1, RMW-2, RMW-3, and a composite sample from all extraction wells (this event may be combined with routine quarterly sampling as part of the *Supplemental Dissolved-phase Groundwater Monitoring Plan*).
- **Quarterly:** In addition to monitoring of the SI Wells (BXS-2, MW-2, MW-3, MW-15, MW-16, MW-17, and MW-18), groundwater samples will be collected from RMW-1, RMW-2, RMW-3, BXS-1, as well as a composite sample from the extraction wells.

During purging and sampling of each well, general parameters (temperature, pH, specific conductance, dissolved oxygen, oxidation reduction potential [ORP], and turbidity) will be monitored for stabilization.

This monitoring schedule will be implemented during the course of the 12-month pilot study. Pending completion of the pilot study, a new monitoring program will be developed and

submitted to EPA for review and approval. The new monitoring program will be based on the evaluation of data collected during the pilot study.

#### **4.2.3 LNAPL Recovery Monitoring**

As discussed in the Work Plan, three new LNAPL extraction will be installed in the Main Treating area. These three wells, along with two existing wells will be used for the extraction of LNAPL using sorbent material ("socks"). Sorbent material will be placed in each well, and inspected at least monthly. Prior to the initial placement of sorbent material, LNAPL will be removed by bailing or equivalent method. In a past LNAPL removal event, LNAPL did not accumulate in the well for several months following initial bailing. At each inspection, the sorbent material will be removed from the well, and LNAPL will be manually extracted into a graduated container. Records will be kept to document the amount of LNAPL recovered. If the sorbent material is saturated with LNAPL after a one-month period, the inspection frequency will be increased to two-weeks. Sorbent socks will be replaced as necessary.

#### **4.3 PERFORMANCE MONITORING SCHEDULE**

Performance monitoring will include weekly, monthly, and quarterly water level measurements and monthly and/or quarterly chemical sampling, as discussed above and summarized in Table PMP-2.

#### **5.0 QUALITY ASSURANCE/QUALITY CONTROL**

All groundwater samples and water levels collected during the performance monitoring program will be collected and analyzed in accordance with the EPA-approved Sampling and Analysis Data Management Plan (SADMP) (included as part of the SI Work Plan) (Baxter, 2002).

Field quality control / quality assurance for each sampling event will consist of one equipment rinsate and one field duplicate per twenty samples, in accordance with the SADMP.

All laboratory data will undergo "Level III" validation, in accordance with the existing groundwater sampling program. Level III validation contains all the elements of CLP-type validation, with the exception of recalculation of results and verification of analyte identification.

## 6.0 REPORTING

Quarterly reports will be prepared and submitted to EPA, approximately 10 weeks following completion of the quarterly sampling event (based on actual initiation of the pilot study). In addition to reporting on operational data as described in the Work Plan, the quarterly report will include a tabular summary of water level and chemical data, figures showing groundwater elevations and chemical concentrations, as well as appendices containing field notes and operating data, as appropriate.

Reports on general system operation, as well as submittal of validated chemical data will be included with the monthly progress reports, consistent with current practice.

*need more reports and soon!*  
*Monthly updates and details*  
*Also include cells if capture is not working*

## 7.0 REFERENCES.

- Baxter, 2002. Site Investigation Work Plan, Revision 2. J.H. Baxter & Co. Wood Treating Facility, Arlington, Washington. Prepared for EPA Region 10 by the J.H. Baxter Project Team. May 15.
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- EPA, 2004. RCRA Corrective Action Plan: Final, U.S. EPA, EPA 520-R-94-004, OSWER Directive 9902.3-2A. May.

## **Tables**

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Table PMP-1. Summary of Well Construction Data.

Well Number	Installation Date	Installer	Well Material	Well Casing I.D. (in.)	Total Depth Drilled (ft bgs)	Measuring Point Elevation (ft msl)	Measured Well Depth (ft bgs)	Screen Length (ft)	Screen Size (in.)	Screen Interval Depth (ft bgs)		Screen Interval Elevation (ft msl)	
										Top	Bottom	Top	Bottom
BXS-1	11-Jul-88	Pacific Testing Lab	PVC	2	49.0	142.90	47.90	10	0.02	39	49	103.90	93.90
BXS-2	6-Jul-88	Pacific Testing Lab	PVC	2	54.0	143.02	45.40	10	0.02	42	52	101.02	91.02
BXS-3	7-Jul-88	Pacific Testing Lab	PVC	2	44.0	142.07	44.56	10	0.02	32.5	42.5	109.57	99.57
BXS-4	8-Jul-88	Pacific Testing Lab	PVC	2	49.0	143.42	47.40	10	0.02	37.5	47.5	105.92	95.92
MW-1	24-Aug-90	Soil Sampling Service	PVC	4	49.5	147.44	41.02	20	0.01	24	44	123.44	103.44
MW-2	23-Aug-90	Soil Sampling Service	PVC	4	49.5	145.96	51.23	20	0.01	27.5	47.5	118.46	98.46
MW-3	27-Aug-90	Soil Sampling Service	PVC	4	49.5	146.38	51.96	20	0.01	29.5	49.5	116.88	96.88
MW-4	26-Aug-94	Tacoma Pump & Drill	PVC	4	40.0	145.02	41.92	10	0.01	30	40	115.02	105.02
HCMW-5	5-Oct-99	NA	PVC	2	36.5	143.75	35.43	20	NA	15	35	128.75	108.75
HCMW-6	4-Oct-99	NA	PVC	2	51.5	146.36	51.10	20	NA	31.5	51.5	114.86	94.86
HCMW-7	7-Oct-99	NA	PVC	2	54.0	144.73	55.08	20	NA	34	54	110.73	90.73
MW-10	26-Aug-02	Cascade Drilling	PVC	2	43.0	144.99	45.58	25	0.02	18	43	126.99	101.99
MW-11	26-Aug-02	Cascade Drilling	PVC	2	38.0	146.06	38.00	25	0.02	13	38	133.06	108.06
MW-12	28-Aug-02	Cascade Drilling	SS	4	38.0	143.79	39.85	20	0.02	18	38	125.79	105.79
MW-13	28-Aug-02	Cascade Drilling	SS	4	42.0	146.62	37.19	20	0.02	17	37	129.62	109.62
MW-14	22-Aug-02	Cascade Drilling	PVC	2	38.0	141.70	38.00	25	0.02	13	38	128.70	103.70
MW-15	14-Oct-02	Cascade Drilling	PVC	2	50.0	142.22	50.30	25	0.02	25	50	117.22	92.22
MW-16	29-Sep-03	Cascade Drilling	PVC	2	50.0	144.85	52.65	25	0.02	25	50	119.85	94.85
MW-17	30-Sep-03	Cascade Drilling	PVC	2	55.0	142.91	55.00	25	0.02	30	55	112.91	87.91
MW-18	30-Sep-03	Cascade Drilling	PVC	2	55.0	142.45	53.83	25	0.02	30	55	112.45	87.45
RMW-1	Pending	NA	PVC	4	50.0	NA	NA	20	NA	NA	NA	NA	NA
RMW-2	Pending	NA	PVC	4	50.0	NA	NA	20	NA	NA	NA	NA	NA
RMW-3	Pending	NA	PVC	4	50.0	NA	NA	20	NA	NA	NA	NA	NA
SMW-1	Pending	NA	PVC	2	40.0	NA	NA	20	NA	NA	NA	NA	NA
SMW-2	Pending	NA	PVC	2	40.0	NA	NA	20	NA	NA	NA	NA	NA
SMW-3	Pending	NA	PVC	2	40.0	NA	NA	20	NA	NA	NA	NA	NA
SMW-4	Pending	NA	PVC	2	40.0	NA	NA	20	NA	NA	NA	NA	NA
SMW-5	Pending	NA	PVC	2	40.0	NA	NA	20	NA	NA	NA	NA	NA
SMW-6	Pending	NA	PVC	2	40.0	NA	NA	20	NA	NA	NA	NA	NA
SMW-7	Pending	NA	PVC	2	40.0	NA	NA	20	NA	NA	NA	NA	NA
SMW-8	Pending	NA	PVC	2	40.0	NA	NA	20	NA	NA	NA	NA	NA
DMW-1	Pending	NA	PVC	2	60.0	NA	NA	10	NA	NA	NA	NA	NA
DMW-2	Pending	NA	PVC	2	60.0	NA	NA	10	NA	NA	NA	NA	NA
DMW-3	Pending	NA	PVC	2	60.0	NA	NA	10	NA	NA	NA	NA	NA
EW-1	Pending	NA	PVC	6	38.0	NA	NA	10	NA	NA	NA	NA	NA
EW-2	Pending	NA	PVC	6	38.0	NA	NA	10	NA	NA	NA	NA	NA
EW-3	Pending	NA	PVC	6	38.0	NA	NA	10	NA	NA	NA	NA	NA
EW-4	Pending	NA	PVC	6	38.0	NA	NA	10	NA	NA	NA	NA	NA
EW-5	Pending	NA	PVC	6	38.0	NA	NA	10	NA	NA	NA	NA	NA
EW-6	Pending	NA	PVC	6	38.0	NA	NA	10	NA	NA	NA	NA	NA
EW-7	Pending	NA	PVC	6	38.0	NA	NA	10	NA	NA	NA	NA	NA
LRW-1	Pending	NA	PVC	4	40.0	NA	NA	20	NA	NA	NA	NA	NA
LRW-2	Pending	NA	PVC	4	40.0	NA	NA	20	NA	NA	NA	NA	NA
LRW-3	Pending	NA	PVC	4	40.0	NA	NA	20	NA	NA	NA	NA	NA

**Notes:**

msl - feet above mean sea level

PVC - polyvinylchloride

SS - stainless steel

bgs - below ground surface

NA - not available

All depths and screen intervals for pending wells are estimated.

Table PMP-2. Summary of Monitoring Well Network.

Well Number	Installation Date	Program	Purpose of Well	Water Bearing zone	Weekly/Every Other Week Water Levels (0- 3 months)	Monthly Water Levels	Pre-startup, 1-month, & 3-month Chemical Data	Collect Quarterly Chemical Data (4 quarters)	Collect Monthly LNAPL Extraction Data
BXS-1	11-Jul-88	Landfill Monitoring Well	Landfill/PMP Monitoring	Upper		X	X	X	
BXS-2	6-Jul-88	Landfill Monitoring Well	Landfill/SI Monitoring	Upper		X	X (SI)	X (SI)	
BXS-3	7-Jul-88	Landfill Monitoring Well	Landfill Monitoring	Upper		X			
BXS-4	8-Jul-88	Landfill Monitoring Well	Landfill Monitoring	Upper		X			
MW-1	24-Aug-90	Site Investigation Well	Water Level Monitoring	Upper		X			
MW-2	23-Aug-90	Site Investigation Well	SI Monitoring	Upper		X	X (SI)	X (SI)	
MW-3	27-Aug-90	Site Investigation Well	SI/PMP Monitoring	Upper	X	X	X (SI)	X (SI)	
MW-4	26-Aug-94	Site Investigation Well	Water Level Monitoring	Upper		X			
HCMW-5	5-Oct-99	Site Investigation Well	Water Level Monitoring	Upper		X			
HCMW-6	4-Oct-99	Site Investigation Well	Water Level Monitoring	Upper		X			
HCMW-7	7-Oct-99	Site Investigation Well	Water Level Monitoring	Upper		X			
MW-10	26-Aug-02	Site Investigation Well	Water Level Monitoring	Upper		X			
MW-11	26-Aug-02	Site Investigation Well	Water Level Monitoring	Upper		X			
MW-12	28-Aug-02	Site Investigation Well	LNAPL Monitoring	Upper					X
MW-13	28-Aug-02	Site Investigation Well	LNAPL Monitoring	Upper					X
MW-14	22-Aug-02	Site Investigation Well	Water Level Monitoring	Upper		X			
MW-15	14-Oct-02	Site Investigation Well	SI/PMP Monitoring	Upper		X	X (SI)	X (SI)	
MW-16	29-Sep-03	Site Investigation Well	SI/PMP Monitoring	Upper		X	X (SI)	X (SI)	
MW-17	30-Sep-03	Site Investigation Well	SI/PMP Monitoring	Upper		X	X (SI)	X (SI)	
MW-18	30-Sep-03	Site Investigation Well	SI/PMP Monitoring	Upper		X	X (SI)	X (SI)	
RMW-1	Pending	Performance Monitoring Well	PMP Monitoring	Upper	X	X	X	X	
RMW-2	Pending	Performance Monitoring Well	PMP Monitoring	Upper	X	X	X	X	
RMW-3	Pending	Performance Monitoring Well	PMP Monitoring	Upper	X	X	X	X	
SMW-1	Pending	Performance Monitoring Well	PMP Monitoring	Upper	X	X	X		
SMW-2	Pending	Performance Monitoring Well	PMP Monitoring	Upper	X	X	X		
SMW-3	Pending	Performance Monitoring Well	PMP Monitoring	Upper	X	X	X		
SMW-4	Pending	Performance Monitoring Well	PMP Monitoring	Upper	X	X	X		
SMW-5	Pending	Performance Monitoring Well	PMP Monitoring	Upper	X	X	X		
SMW-6	Pending	Performance Monitoring Well	PMP Monitoring	Upper	X	X	X		
SMW-7	Pending	Performance Monitoring Well	PMP Monitoring	Upper	X	X	X		
SMW-8	Pending	Performance Monitoring Well	PMP Monitoring	Upper	X	X	X		
DMW-1	Pending	Performance Monitoring Well	PMP Monitoring	Lower	X	X	X		
DMW-2	Pending	Performance Monitoring Well	PMP Monitoring	Lower	X	X	X		
DMW-3	Pending	Performance Monitoring Well	PMP Monitoring	Lower	X	X	X		
EW-1	Pending	Pilot Extraction Well	Extraction	Upper		X			
EW-2	Pending	Pilot Extraction Well	Extraction	Upper		X			
EW-3	Pending	Pilot Extraction Well	Extraction	Upper		X			
EW-4	Pending	Pilot Extraction Well	Extraction	Upper		X			
EW-5	Pending	Pilot Extraction Well	Extraction	Upper		X			
EW-6	Pending	Pilot Extraction Well	Extraction	Upper		X			
EW-7	Pending	Pilot Extraction Well	Extraction	Upper		X			
EW Composite	--	--	Composite from all EW wells	--			X	X	
LRW-1	Pending	LNAPL Extraction Well	LNAPL Monitoring	Upper					X
LRW-2	Pending	LNAPL Extraction Well	LNAPL Monitoring	Upper					X
LRW-3	Pending	LNAPL Extraction Well	LNAPL Monitoring	Upper					X

**Notes:**

msl - feet above mean sea level

PVC - polyvinylchloride

SS - stainless steel

bgs - below ground surface

NA - not available

All depths and screen intervals for pending wells are estimated.

X (SI) - denotes well part of existing SI groundwater sampling program

## Figures

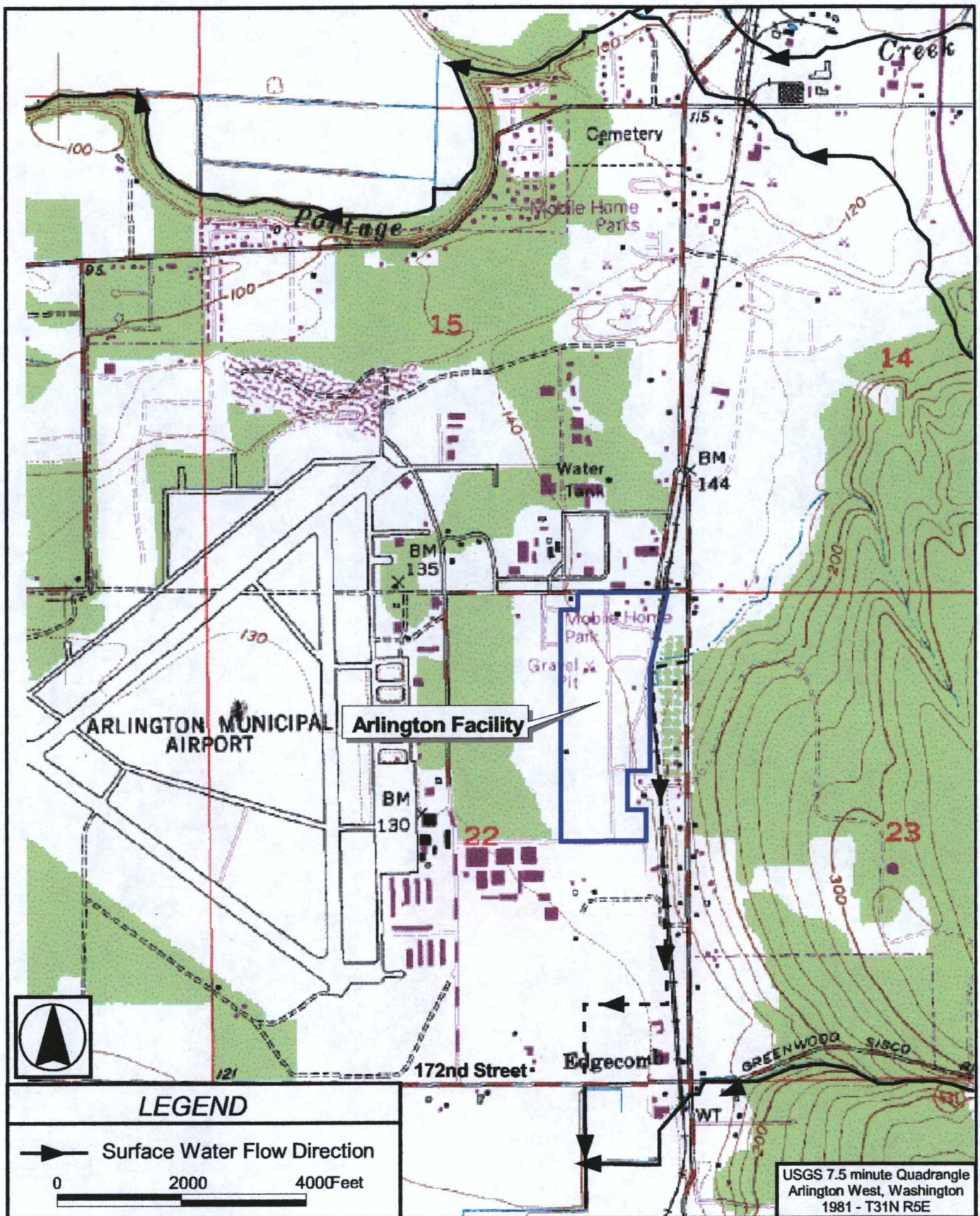


Figure 1. Site Vicinity

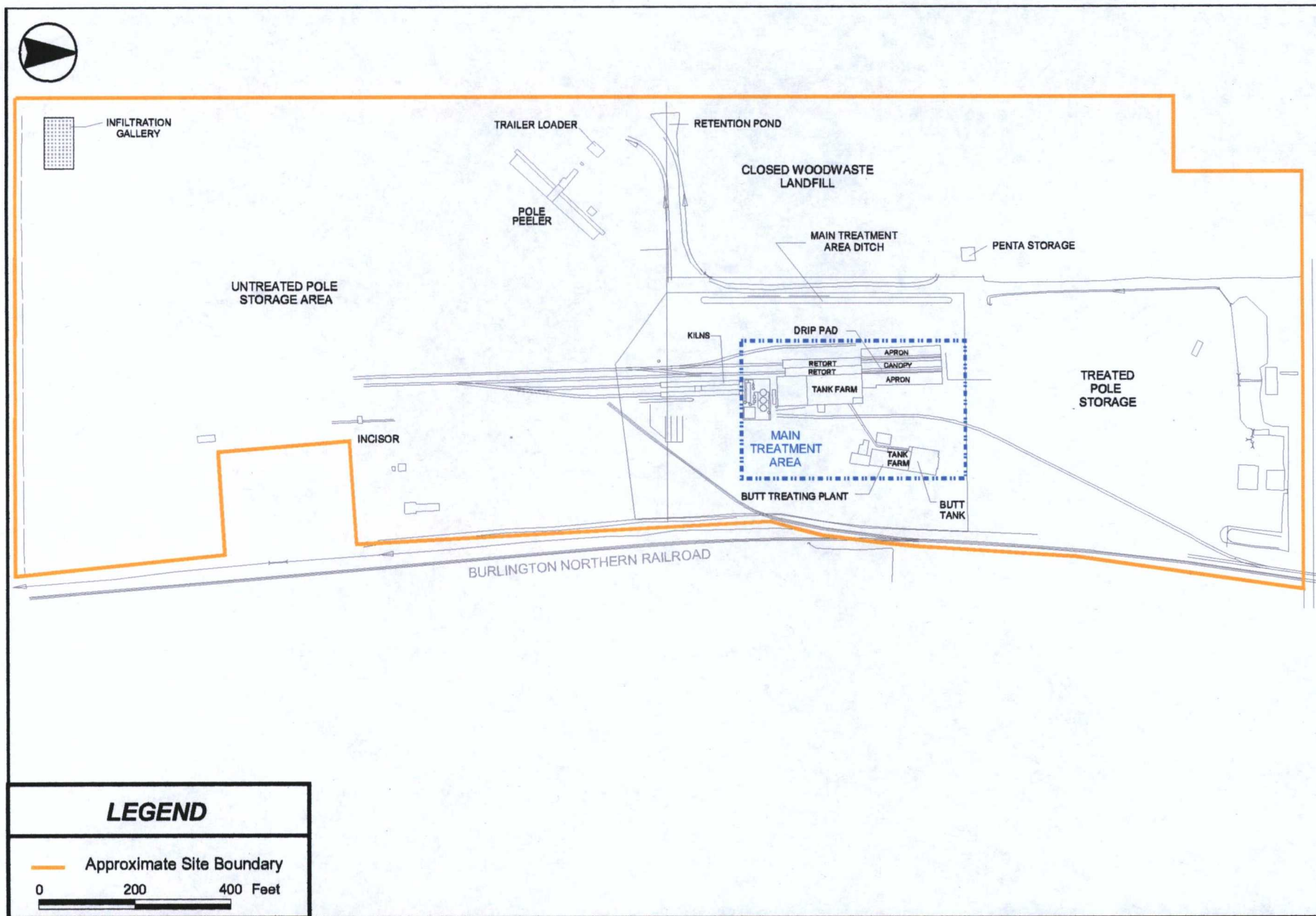


Figure 2. Site Plan

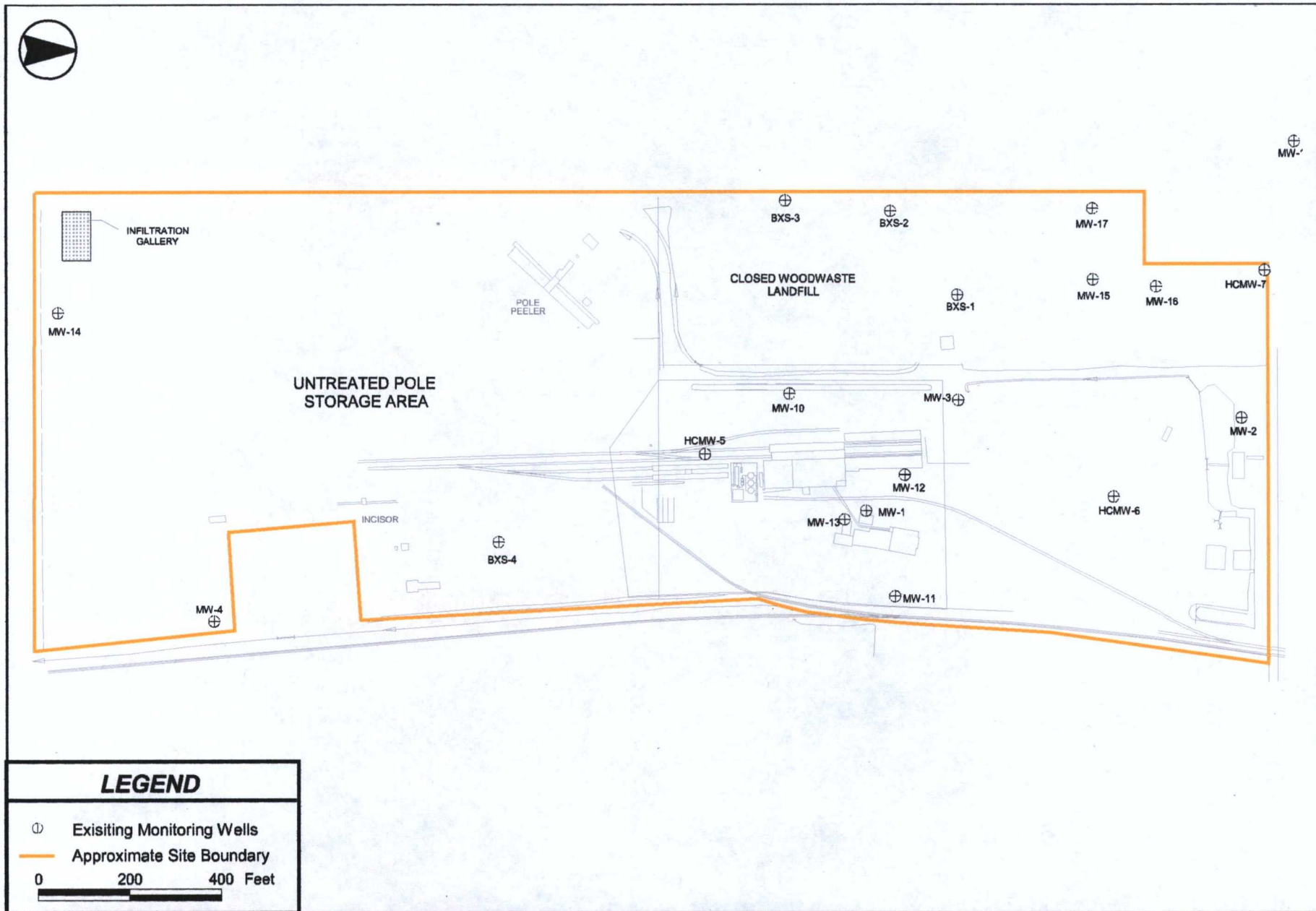
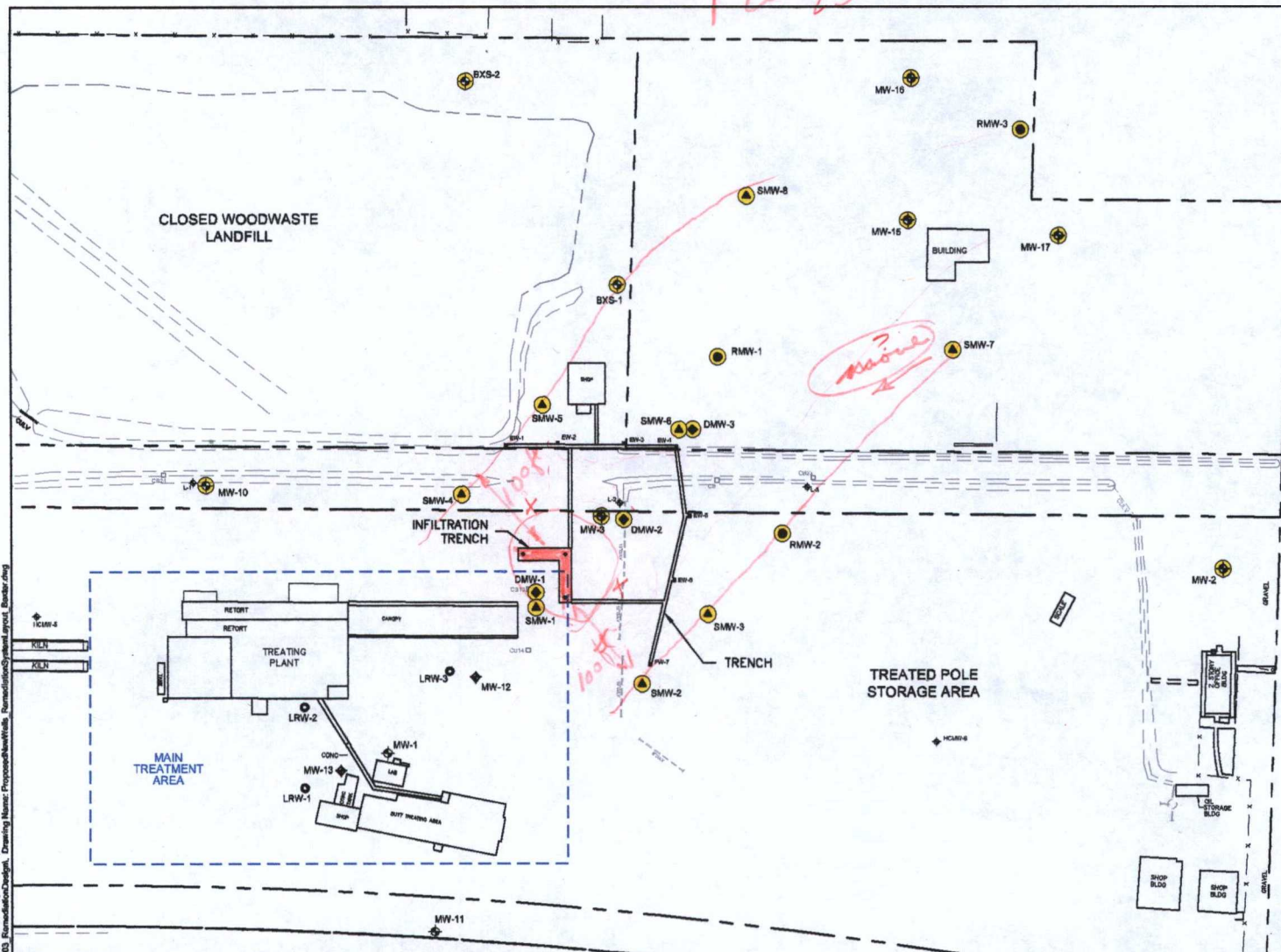


Figure 3. Existing Monitoring Wells

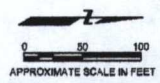
*Need SMW close to plume centerline 150 to 100 ft*

*X add shallow piezometers*



- LEGEND**
- MW-18 EXISTING WELL TO USE IN NET
  - RMW-1 NEW MONITORING WELL (40' DEEP, 4" DIA.)
  - SMW-1 NEW MONITORING WELL (40' DEEP, 2" DIA.)
  - DMW-1 NEW MONITORING WELL (66' DEEP, 2" DIA.)
  - MW-12 EXISTING LNAPL RECOVERY WELL
  - LRW-1 NEW LNAPL RECOVERY WELL
  - EX-1 EXTRACTION WELL AND VAULT IDENTIFYING NUMBER
  - FORMER CATCH BASIN
  - APPROXIMATE SITE BOUNDARY

- NOTES:**
1. ALL WELLS SHALL BE INSTALLED IN ACCORDANCE WITH STATE OF WASHINGTON WELL INSTALLATION REGULATIONS.
  2. CLEAR THE VEGETATION TO ACCESS WELL LOCATIONS.
  3. GEOMATRIX SHALL LOCATE ALL WELLS.
  4. STOCKPILE DRILL CUTTINGS IN STOCKPILE AREA. SEGREGATE AS DIRECTED BY GEOMATRIX.
  5. DEVELOP ALL WELLS AND STORE THE WATER IN TEMPORARY HOLDING TANK PROVIDED BY GEOMATRIX.



P:\14 Date: 08/13/07 - 4:11 pm, Plotted by: ashberg  
 Drawing Path: S:\12\08003, RemediationDesign, Drawing Name: ProposedNewWells, RemediationDesign, Baxter.dwg

NO.	REVISION	DATE	APPROVED

**Geomatrix**

Geomatrix Consultants, Inc.  
 600 University Street  
 Suite 1020  
 Seattle, Washington 98101

DRAFT	<b>MONITORING AND LNAPL RECOVERY WELLS NETWORK</b>		DATE: 08/13/2007
	J.H. BAXTER ARLINGTON, WASHINGTON		PROJECT NO.: 12706
	DRAWING M-1		



June 15, 2007

Ms. Jan Palumbo, RCRA Project Manager  
United States EPA, Region 10  
1200 Sixth Avenue, Mail Stop WCM-121  
Seattle, WA 98101

RECEIVED

JUN 18 2007

Office of Air, Waste & Toxics

Subject: **June 15, 2007, Progress Report  
J.H. BAXTER ARLINGTON FACILITY  
Docket No. RCRA-10-2001-0086**

Dear Ms. Palumbo:

This letter provides the June 15, 2007, progress report for work under the Administrative Order on Consent (AOC) for the J.H. Baxter & Co. (Baxter) facility during the period from May 15, 2007, to June 15, 2007.

**Significant Developments This Period**

This section discusses significant developments for the reporting period, including actions performed and any problems encountered relative to work required by the AOC. Significant developments that occurred on this project during this reporting period are outlined below:

- Baxter was unable to collect groundwater elevation data at the beginning of June due to scheduling conflicts.

**Anticipated Developments Next Period**

This section discusses developments anticipated during the next reporting period, as outlined below:

- Baxter will continue work on corrective measures related activities.



### Other Information

Any other information relevant to the AOC is discussed in this section, including results of any sampling or testing completed within the reporting period.

- Baxter is submitting a summary of environmental sampling data collected by Stella Jones Corporation (SJC) in February 2007 as Attachment 1. SJC collected the samples prior to executing the lease of Parcel A and Parcel B. SJC's sampling was not related to, and, was outside the scope of the AOC data collection. The data includes a summary of analytical sampling results and maps showing sample locations, as provided by SJC. Copies of laboratory reports are included as Attachment 2. A Quality Assurance Review of the data provided to Baxter (memorandum from Kathy Gunderson to J. Stephen Barnett dated May 14, 2007) is included as Attachment 3.

### Certification

I certify that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to evaluate the information submitted. I certify that the information contained in or accompanying this submittal is true, accurate and complete. As to those identified portions(s) of this submittal for which I cannot personally verify the accuracy, I certify that this submittal and all attachments were prepared in accordance with procedures designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those directly responsible for gathering the information, or the immediate supervisor of such person(s), the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature:

Name: Georgia Baxter  
Title: Chief Executive Officer  
Date: June 15, 2007

*Richard D. Keelay* For/

We trust this letter meets the intent of the Progress Report per Paragraph 71 of the AOC. If you have any questions, please contact me at (650) 349-0201

Sincerely,

*Richard D. Keelay* For/

Georgia Baxter  
CEO

cc: Jeanne Tran, Ecology  
RueAnn Thomas, Bluefield Holdings  
Douglas Fox, Stella-Jones Corp.  
J. Stephen Barnett, Premier Environmental Services, Inc.

## **Attachment 1**

### **Summary of Analytical Results and Sample Locations (Provided by Stella Jones Corporation)**

**TABLE 1: NORTHING AND EASTING SAMPLE LOCATION GRID COORDINATES**

Sample Point Number	UTM Zone	Easting (m)	Northing (m)	Location / Sample Name	Media	Comments
1	10	563563	5334529	Area 5 Comp	Soil	
2	10	563560	5334590	Area 5 Comp	Soil	
3	10	NA	NA	Area 5 Comp	Not sampled	
4	10	563558	5334713	Area 5 Comp	Soil	
5	10	563619	5334718	Area 5 Comp	Soil	
6	10	563623	5334656	Area 5 Comp	Soil	
7	10	563623	5334592	Area 5 Comp	Soil	
8	10	563629	5334529	Area 5 Comp	Soil	
9	10	563687	5334405	Area 5 Comp	Soil	
10	10	563687	5334470	Area 5 Comp	Soil	
11	10	563685	5334529	Area 5 Comp	Soil	
12	10	563685	5334591	Area 5 Comp	Soil	
13	10	563680	5334650	Area 5 Comp	Soil	
14	10	563680	5334718	Area 5 Comp	Soil	
15	10	563742	5334720	Area 5 Comp	Soil	
16	10	563743	5334654	Area 5 Comp	Soil	
17	10	563747	5334589	Area 5 Comp	Soil	
18	10	563747	5334462	Area 5 Comp	Soil	
19	10	563748	5334405	Area 5 Comp	Soil	
20	10	563531	5334369	Origin of Grid	Control Point	
21	10	563644	5334972	Ditch 2	Water	
22	10	563642	5334837	Ditch 1 Sed	Sediment	
23	10	563644	5334867	Ditch 1 Sed	Sediment	
24	10	563644	5334896	Ditch 1 Sed	Sediment	
25	10	563565	5334400	Area 6	Soil	
26	10	563565	5334463	Area 6	Soil	
27	10	563629	5334464	Area 6	Soil	
28	10	563626	5334404	Area 6	Soil	
29	10	563652	5335095	Area 1	Soil	
30	10	563652	5335065	Area 1	Soil	
31	10	563654	5335034	Area 1	Soil	
32	10	563652	5335005	Area 1	Soil	
33	10	563655	5334970	Area 1	Soil	was 5335970
34	10	563685	5334970	Area 1	Soil	was 5335970
35	10	563685	5335000	Area 1	Soil	
36	10	563685	5335032	Area 1	Soil	
37	10	563685	5335060	Area 1	Soil	
38	10	563685	5335085	Area 1	Soil	
39	10	563719	5335090	Area 1	Soil	
40	10	563717	5335060	Area 1	Soil	
41	10	563718	5335030	Area 1	Soil	
42	10	563716	5335000	Area 1	Soil	
43	10	563716	5334970	Area 1	Soil	
44	10	563712	5335124	Ditch 3	Water	
45	10	563726	5335123	Ditch 3 Sed	Sediment	
46	10	563706	5335124	Ditch 3 Sed	Sediment	
47	10	563692	5335121	Ditch 3 Sed	Sediment	
48	10	563661	5335120	Ditch 3 Sed	Sediment	
49	10	563730	5334970	Area 2	Soil	
50	10	563729	5335000	Area 2	Soil	
51	10	563730	5335030	Area 2	Soil	
52	10	563730	5335060	Area 2	Soil	
53	10	563730	5335090	Area 2	Soil	
54	10	563730	5335122	Area 2	Soil	
55	10	563761	5335119	Area 2	Soil	
56	10	563760	5335090	Area 2	Soil	

TABLE 1: NORTHING AND EASTING SAMPLE LOCATION GRID COORDINATES

Sample Point Number	UTM Zone	Easting (m)	Northing (m)	Location / Sample Name	Media	Comments
57	10	563760	5335060	Area 2	Soil	
58	10	563760	5335030	Area 2	Soil	
59	10	563760	5335000	Area 2	Soil	
60	10	563759	5334968	Area 2	Soil	
61	10	563791	5334973	Area 2	Soil	
62	10	563785	5335000	Area 2	Soil	
63	10	563790	5335030	Area 2	Soil	
64	10	563790	5335060	Area 2	Soil	
65	10	563790	5335090	Area 2	Soil	
66	10	563788	5335120	Area 2	Soil	
67	10	563652	5334932	Area 4	Soil	
68	10	563652	5334902	Area 4	Soil	
69	10	563657	5334872	Area 4	Soil	
70	10	563652	5334842	Area 4	Soil	
71	10	563656	5334810	Area 4	Soil	
72	10	563652	5334782	Area 4	Soil	
73	10	563682	5334782	Area 4	Soil	
74	10	563682	5334812	Area 4	Soil	
75	10	563712	5334812	Area 4	Soil	
76	10	563712	5334782	Area 4	Soil	
77	10	563712	5334902	Area 4	Soil	
78	10	563712	5334932	Area 4	Soil	
79	10	563643	5334963	Ditch 2 Sed	Sediment	was 563651
80	10	563644	5335047	Ditch 2 Sed	Sediment	
81	10	563642	5335069	Ditch 2 Sed	Sediment	
82	10	563641	5335094	Ditch 2 Sed	Sediment	
83	10	563730	5334940	Area 3	Soil	
84	10	563730	5334910	Area 3	Soil	
85	10	563725	5334874	Area 3	Soil	
86	10	563730	5334850	Area 3	Soil	
87	10	563730	5334820	Area 3	Soil	
88	10	563730	5334786	Area 3	Soil	
89	10	563731	5334761	Area 3	Soil	
90	10	563763	5334761	Area 3	Soil	
91	10	563759	5334791	Area 3	Soil	
92	10	563762	5334820	Area 3	Soil	
93	10	563760	5334850	Area 3	Soil	
94	10	563760	5334880	Area 3	Soil	
95	10	563760	5334910	Area 3	Soil	
96	10	563760	5334940	Area 3	Soil	
97	10	563760	5334943	Area 3	Soil	
98	10	563789	5334910	Area 3	Soil	
99	10	563714	5334964	Channel 1	Sediment	
100	10	563716	5334966	Channel 1	Sediment	
101	10	563688	5334962	Channel 1	Sediment	
102	10	563692	5334961	Channel 1	Sediment	
103	10	563708	5334752	Channel 2	Sediment	
104	10	563708	5334759	Channel 2	Sediment	
105	10	563706	5334771	Channel 2	Sediment	
106	10	563705	5334784	Channel 2	Sediment	
107	10	563651	5334899	Ditch 1	Water	paced in field

TABLE 2: SURFACE WATER SAMPLE ANALYTICAL RESULTS

PARAMETER	Parcel and/or Sample	Grab sample of water	Grab sample of water	Grab sample of water
	Location/Description	in Ditch 1	in Ditch 2	in Ditch 3
	Date Sample Collected	Feb. 7/07	Jan. 31/07	Feb. 1/07
	Field Sample Number	Ditch 1	Ditch 2	Ditch 3
	Lab Reference Number	07-2245	07-1733	07-2019
UNITS				
Pentachlorophenol	ug/L	460	320	110
2,4,6-Trichlorophenol	ug/L	<0.25	<0.25	<0.25
2,3,6-Trichlorophenol	ug/L	<0.25	<0.25	<0.25
2,4,5-Trichlorophenol	ug/L	<0.25	<0.25	<0.25
2,3,4-Trichlorophenol	ug/L	<0.25	<0.25	<7.3
2,3,5,6- and 2,3,4,6 Tetrachlorophenol	ug/L	<0.25	<0.25	<0.25
2,3,4,5-Tetrachlorophenol	ug/L	<37	<31	<9.0
Diesel (DRO)	ug/L	1.50	0.71	1.8
Residual Oil (RRO)	ug/L	<250	3,800	22,000
Gasoline	ug/L	<500	17,000	130,000
Naphthalene	ug/L	<250	<250	<250
2-Methylnaphthalene	ug/L	<1.0	<1.0	<1.0
Acenaphthylene	ug/L	<1.0	<1.0	<1.0
Acenaphthene	ug/L	<1.0	<1.0	<1.0
Fluorene	ug/L	<1.0	<1.0	<1.0
Phenanthrene	ug/L	<1.0	<1.0	<1.0
Anthracene	ug/L	<1.0	<1.0	<1.0
Fluoranthene	ug/L	<1.0	<1.0	<1.0
Pyrene	ug/L	<1.0	<1.0	<1.0
Benzo (a) anthracene	ug/L	<1.0	<1.0	<1.0
Chrysene	ug/L	<1.0	<1.0	<1.0
Benzo (b) fluoranthene	ug/L	<1.0	<1.0	<1.0
Benzo (k) fluoranthene	ug/L	<1.0	<1.0	<1.0
Benzo (a) pyrene	ug/L	<1.0	<1.0	<1.0
Indeno (1,2,3-cd) pyrene	ug/L	<1.0	<1.0	<1.0
Dibenzo (a,h) anthracene	ug/L	<1.0	<1.0	<1.0
Benzo (g,h,i) perylene	ug/L	<1.0	<1.0	<1.0
Dibenzofuran	ug/L	<1.0	<1.0	<1.0
Copper	ug/L	<1.0	<1.0	<1.0
		80	26	44

## NOTES:

&lt; = denotes less than method reporting limit

Data summary prepared by Stella Jones Corp.

TABLE 3: SEDIMENT SAMPLE ANALYTICAL RESULTS

PARAMETER	Parcel and/or Sample Location/Description Date Sample Collected Field Sample Number Lab Reference Number	Parcel A, Grab sediment sample Jan. 31/07 Ditch 1 Sed 07-1728	Parcel A, Grab sediment sample Feb. 1/07 Ditch 2 Sed 07-2014	Parcel A, Grab sediment sample Feb. 1/07 Ditch 3 Sed 07-2013	Parcel A, Grab sediment sample Feb. 2/07 Channel 1 07-2015	Parcel A, Grab sediment sample Feb. 2/07 Channel 2 07-2016
	UNITS					
Pentachlorophenol	mg/kg	10	10	6	10	3.5
2,4,6-Trichlorophenol	mg/kg	<0.046	<0.0077	<0.078	<0.0091	<0.009
2,3,6-Trichlorophenol	mg/kg	<0.046	<0.0077	<0.011	<0.0091	<0.009
2,4,5-Trichlorophenol	mg/kg	<1.0	<0.0077	<1.1	<0.56	<0.11
2,3,4-Trichlorophenol	mg/kg	<0.046	<0.0077	<0.011	<0.0091	<0.009
2,3,5,6- and 2,3,4,6 Tetrachlorophenol	mg/kg	<0.35	<0.46	<0.39	<0.25	<0.12
2,3,4,5-Tetrachlorophenol	mg/kg	0.62	0.16	0.97	1.1	0.076
Diesel (DRO)	mg/kg	720	1,100	2,300	710	150
Residual Oil (RRO)	mg/kg	3,200	4,500	13,000	1,600	520
Gasoline	mg/kg	<12	<8.3	<16	<12	<12
Naphthalene	mg/kg	<0.066	<0.065	<0.068	<0.64	<0.063
2-Methylnaphthalene	mg/kg	<0.066	0.11	0.073	<0.27	<0.063
Acenaphthylene	mg/kg	<0.066	<0.065	<0.068	<0.064	<0.063
Acenaphthene	mg/kg	<0.066	0.046	<0.068	0.66	<0.063
Fluorene	mg/kg	0.089	0.11	0.048	0.15	<0.063
Phenanthrene	mg/kg	0.22	1.2	0.2	0.6	0.069
Anthracene	mg/kg	0.11	<0.065	<0.068	<0.064	0.031
Fluoranthene	mg/kg	0.44	0.068	0.19	0.17	0.065
Pyrene	mg/kg	0.54	0.24	0.4	0.33	0.11
Benzo (a) anthracene	mg/kg	0.08	<0.065	0.051	0.044	<0.063
Chrysene	mg/kg	0.2	0.089	0.19	0.17	0.1
Benzo (b) fluoranthene	mg/kg	0.16	0.046	0.65	0.081	0.069
Benzo (k) fluoranthene	mg/kg	<0.066	0.069	0.78	0.15	0.94
Benzo (a) pyrene	mg/kg	<0.066	<0.065	0.65	0.042	<0.063
Indeno (1,2,3-cd) pyrene	mg/kg	<0.066	<0.065	<0.068	<0.064	<0.063
Dibenzo (a,h) anthracene	mg/kg	<0.066	<0.065	<0.068	<0.064	<0.063
Benzo (g,h,i) perylene	mg/kg	<0.066	<0.065	<0.068	<0.064	<0.063
Dibenzofuran	mg/kg	<0.066	<0.065	<0.068	<0.064	<0.063
Copper	mg/kg	71.1	41.5	114	60.7	188

## NOTES:

&lt; = denotes less than method reporting limit

Data summary prepared by Stella Jones Corp.

TABLE 4: EFFLUENT SAMPLE ANALYTICAL RESULTS

PARAMETER	Parcel and/or Sample Location/Description Date Sample Collected Field Sample Number Lab Reference Number UNITS	Stormwater 8 hour Composite Jan. 30/07 ST 8H Comp 07-1729	Stormwater Grab Stormwater Grab Feb. 8/07 ST Grab 07-2247	Process water 8 hour Composite Jan. 31/07 PR 8H Comp 07-2017
Pentachlorophenol	ug/L	3.8	0.4	48
2,4,6-Trichlorophenol	ug/L	<0.25	<0.25	<2.5
2,3,6-Trichlorophenol	ug/L	<0.25	<0.25	<2.5
2,4,5-Trichlorophenol	ug/L	<0.25	<0.25	<2.5
2,3,4-Trichlorophenol	ug/L	<0.25	<0.25	<2.5
2,3,5,6- and 2,3,4,6 Tetrachlorophenol	ug/L	<0.25	<0.25	<3.2
2,3,4,5-Tetrachlorophenol	ug/L	<0.25	<0.25	<2.5
Diesel (DRO)	ug/L	<250	N/A	14,000
Residual Oil (RRO)	ug/L	<500	N/A	1,700
Gasoline	ug/L	<250	N/A	720
Naphthalene	ug/L	<1.0	N/A	<1.3
2-Methylnaphthalene	ug/L	<1.0	N/A	1.2
Acenaphthylene	ug/L	<1.0	N/A	<1.0
Acenaphthene	ug/L	<1.0	N/A	<1.0
Fluorene	ug/L	<1.0	N/A	<1.0
Phenanthrene	ug/L	<1.0	N/A	<1.0
Anthracene	ug/L	<1.0	N/A	<1.0
Fluoranthene	ug/L	<1.0	N/A	<1.0
Pyrene	ug/L	<1.0	N/A	<1.0
Benzo (a) anthracene	ug/L	<1.0	N/A	<1.0
Chrysene	ug/L	<1.0	N/A	<1.0
Benzo (b) fluoranthene	ug/L	<1.0	N/A	<1.0
Benzo (k) fluoranthene	ug/L	<1.0	N/A	<1.0
Benzo (a) pyrene	ug/L	<1.0	N/A	<1.0
Indeno (1,2,3-cd) pyrene	ug/L	<1.0	N/A	<1.0
Dibenzo (a,h) anthracene	ug/L	<1.0	N/A	<1.0
Benzo (g,h,i) perylene	ug/L	<1.0	N/A	<1.0
Dibenzofuran	ug/L	<1.0	<1.0	<1.0
Copper	ug/L	6	3	1,050

## NOTES:

&lt; = denotes less than method reporting limit

Data summary prepared by Stella Jones Corp.

N/A - not analyzed

TABLE 5: FILTER CAKE SAMPLE ANALYTICAL RESULTS

PARAMETER	Parcel and/or Sample Location/Description Date Sample Collected Field Sample Number Lab Reference Number UNITS	Stormwater Filter Cake Jan. 31/07 ST Cake 07-1727
Pentachlorophenol	mg/kg	26
2,4,6-Trichlorophenol	mg/kg	<0.044
2,3,6-Trichlorophenol	mg/kg	<0.044
2,4,5-Trichlorophenol	mg/kg	<0.044
2,3,4-Trichlorophenol	mg/kg	<0.044
2,3,5,6- and 2,3,4,6 Tetrachlorophenol	mg/kg	<0.044
2,3,4,5-Tetrachlorophenol	mg/kg	<1.3
Diesel (DRO)	mg/kg	0.033
Residual Oil (RRO)	mg/kg	1,100
Gasoline	mg/kg	3,400
Naphthalene	mg/kg	<16
2-Methylnaphthalene	mg/kg	<0.066
Acenaphthylene	mg/kg	<0.066
Acenaphthene	mg/kg	<0.066
Fluorene	mg/kg	<0.066
Phenanthrene	mg/kg	<0.066
Anthracene	mg/kg	<0.066
Fluoranthene	mg/kg	<0.066
Pyrene	mg/kg	<0.066
Benzo (a) anthracene	mg/kg	<0.066
Chrysene	mg/kg	<0.066
Benzo (b) fluoranthene	mg/kg	<0.066
Benzo (k) fluoranthene	mg/kg	<0.066
Benzo (a) pyrene	mg/kg	<0.066
Indeno (1,2,3-cd) pyrene	mg/kg	<0.066
Dibenzo (a,h) anthracene	mg/kg	<0.066
Benzo (g,h,i) perylene	mg/kg	<0.066
Dibenzofuran	mg/kg	<0.066
Copper	mg/kg	126

## NOTES:

< = denotes less than method reporting limit  
Data summary preped by Stella Jones Corp.

TABLE 6: GROUNDWATER SAMPLE ANALYTICAL RESULTS

PARAMETER	Parcel and/or Sample Location/Description Date Sample Collected Field Sample Number Lab Reference Number UNITS	Grab sample - Groundwater Feb. 7/07 MW-1 07-2243	Grab sample - Groundwater Jan. 31/07 MW-2 07-1730	Grab sample - Groundwater Jan. 31/07 MW-3 07-1731	Grab sample - Groundwater Feb. 6/07 MW-4 07-2239
Pentachlorophenol	ug/L	<0.25	<0.25	21	<0.25
2,4,6-Trichlorophenol	ug/L	<0.25	<0.25	<1.0	<0.25
2,3,6-Trichlorophenol	ug/L	<0.25	<0.25	<1.0	<0.25
2,4,5-Trichlorophenol	ug/L	<0.25	<0.25	<1.0	<0.25
2,3,4-Trichlorophenol	ug/L	<0.25	<0.25	<1.0	<0.25
2,3,5,6- and 2,3,4,6 Tetrachlorophenol	ug/L	<0.25	<0.25	<1.0	<0.25
2,3,4,5-Tetrachlorophenol	ug/L	<0.25	<0.25	<1.5	<0.25
Diesel (DRO)	ug/L	<0.25	<0.25	<1.0	<0.25
Residual Oil (RRO)	ug/L	<250	<250	<250	<250
Gasoline	ug/L	<500	<500	<500	<500
Naphthalene	ug/L	<250	<250	<250	<250
2-Methylnaphthalene	ug/L	<1.0	<1.0	<1.0	<1.0
Acenaphthylene	ug/L	<1.0	<1.0	<1.0	<1.0
Acenaphthene	ug/L	<1.0	<1.0	<1.0	<1.0
Fluorene	ug/L	<1.0	<1.0	<1.0	<1.0
Phenanthrene	ug/L	<1.0	<1.0	<1.0	<1.0
Anthracene	ug/L	<1.0	<1.0	<1.0	<1.0
Fluoranthene	ug/L	<1.0	<1.0	<1.0	<1.0
Pyrene	ug/L	<1.0	<1.0	<1.0	<1.0
Benzo (a) anthracene	ug/L	<1.0	<1.0	<1.0	<1.0
Chrysene	ug/L	<1.0	<1.0	<1.0	<1.0
Benzo (b) fluoranthene	ug/L	<1.0	<1.0	<1.0	<1.0
Benzo (k) fluoranthene	ug/L	<1.0	<1.0	<1.0	<1.0
Benzo (a) pyrene	ug/L	<1.0	<1.0	<1.0	<1.0
Indeno (1,2,3-cd) pyrene	ug/L	<1.0	<1.0	<1.0	<1.0
Dibenzo (a,h) anthracene	ug/L	<1.0	<1.0	<1.0	<1.0
Benzo (g,h,i) perylene	ug/L	<1.0	<1.0	<1.0	<1.0
Dibenzofuran	ug/L	<1.0	<1.0	<1.0	<1.0
Copper	ug/L	<2	<1.0	<1.0	<1.0
NOTES:		<2	2	2	<2

< = denotes less than method reporting limit  
Data summary prepared by Stella Jones Corp.

TABLE 6: GROUNDWATER SAMPLE ANALYTICAL RESULTS

	Parcel and/or Sample Location/Description	Grab sample - Groundwater	Grab sample - Groundwater	Grab sample - Groundwater	Grab sample - Groundwater
	Date Sample Collected	Feb. 7/07	Feb. 7/07	Feb. 6/07	Feb. 6/07
	Field Sample Number	HCMW-5	HCMW-6	MW-10	MW-11
	Lab Reference Number	07-2244	07-2246	07-2242	07-2241
PARAMETER	UNITS	(µg/L)	(µg/L)	(µg/L)	(µg/L)
Pentachlorophenol	ug/L	<0.25	<0.25	<0.25	<0.25
2,4,6-Trichlorophenol	ug/L	<0.25	<0.25	<0.25	<0.25
2,3,6-Trichlorophenol	ug/L	<0.25	<0.25	<0.25	<0.25
2,4,5-Trichlorophenol	ug/L	<0.25	<0.25	<0.25	<0.25
2,3,4-Trichlorophenol	ug/L	<0.25	<0.25	<0.25	<0.25
2,3,5,6- and 2,3,4,6 Tetrachlorophenol	ug/L	<0.25	<0.25	<0.25	<0.25
2,3,4,5-Tetrachlorophenol	ug/L	<0.25	<0.25	<0.25	<0.25
Diesel (DRO)	ug/L	<250	3,300	<250	<250
Residual Oil (RRO)	ug/L	<500	6,700	<500	<500
Gasoline	ug/L	<250	<250	<250	<250
Naphthalene	ug/L	<1.0	<1.0	<1.0	<1.0
2-Methylnaphthalene	ug/L	<1.0	<1.0	<1.0	<1.0
Acenaphthylene	ug/L	<1.0	<1.0	<1.0	<1.0
Acenaphthene	ug/L	<1.0	<1.0	<1.0	<1.0
Fluorene	ug/L	<1.0	<1.0	<1.0	<1.0
Phenanthrene	ug/L	<1.0	<1.0	<1.0	<1.0
Anthracene	ug/L	<1.0	<1.0	<1.0	<1.0
Fluoranthene	ug/L	<1.0	<1.0	<1.0	<1.0
Pyrene	ug/L	<1.0	<1.0	<1.0	<1.0
Benzo (a) anthracene	ug/L	<1.0	<1.0	<1.0	<1.0
Chrysene	ug/L	<1.0	<1.0	<1.0	<1.0
Benzo (b) fluoranthene	ug/L	<1.0	<1.0	<1.0	<1.0
Benzo (k) fluoranthene	ug/L	<1.0	<1.0	<1.0	<1.0
Benzo (a) pyrene	ug/L	<1.0	<1.0	<1.0	<1.0
Indeno (1,2,3-cd) pyrene	ug/L	<1.0	<1.0	<1.0	<1.0
Dibenzo (a,h) anthracene	ug/L	<1.0	<1.0	<1.0	<1.0
Benzo (g,h,i) perylene	ug/L	<1.0	<1.0	<1.0	<1.0
Dibenzofuran	ug/L	<1.0	<1.0	<1.0	<1.0
Copper	ug/L	<2	43	<2	5

## NOTES:

&lt; = denotes less than method reporting limit

Data summary prepared by Stella Jones Corp.

TABLE 6: GROUNDWATER SAMPLE ANALYTICAL RESULTS

PARAMETER	Parcel and/or Sample Location/Description Date Sample Collected Field Sample Number Lab Reference Number UNITS	Grab sample - Groundwater Feb. 6/07 MW-14 07-2240	Grab sample - Groundwater Feb. 2/07 MW-15 07-2022	Grab sample - Groundwater Jan. 31/07 MW-16 07-1732	Grab sample - Groundwater Feb. 2/07 MW-17 07-2021
Pentachlorophenol	ug/L	<0.25	270	<0.25	<0.25
2,4,6-Trichlorophenol	ug/L	<0.25	0.25	<0.25	<0.25
2,3,6-Trichlorophenol	ug/L	<0.25	<1.0	<0.25	<0.25
2,4,5-Trichlorophenol	ug/L	<0.25	<1.0	<0.25	<0.25
2,3,4-Trichlorophenol	ug/L	<0.25	<1.0	<0.25	<0.25
2,3,5,6- and 2,3,4,6 Tetrachlorophenol	ug/L	<0.25	<13	<0.25	<0.25
2,3,4,5-Tetrachlorophenol	ug/L	<0.25	0.25	<0.25	<0.25
Diesel (DRO)	ug/L	<250	<250	<250	<250
Residual Oil (RRO)	ug/L	<500	<500	<500	<500
Gasoline	ug/L	<250	<250	<250	<250
Naphthalene	ug/L	<1.0	<1.0	<1.0	<1.0
2-Methylnaphthalene	ug/L	<1.0	<1.0	<1.0	<1.0
Acenaphthylene	ug/L	<1.0	<1.0	<1.0	<1.0
Acenaphthene	ug/L	<1.0	<1.0	<1.0	<1.0
Fluorene	ug/L	<1.0	<1.0	<1.0	<1.0
Phenanthrene	ug/L	<1.0	<1.0	<1.0	<1.0
Anthracene	ug/L	<1.0	<1.0	<1.0	<1.0
Fluoranthene	ug/L	<1.0	<1.0	<1.0	<1.0
Pyrene	ug/L	<1.0	<1.0	<1.0	<1.0
Benzo (a) anthracene	ug/L	<1.0	<1.0	<1.0	<1.0
Chrysene	ug/L	<1.0	<1.0	<1.0	<1.0
Benzo (b) fluoranthene	ug/L	<1.0	<1.0	<1.0	<1.0
Benzo (k) fluoranthene	ug/L	<1.0	<1.0	<1.0	<1.0
Benzo (a) pyrene	ug/L	<1.0	<1.0	<1.0	<1.0
Indeno (1,2,3-cd) pyrene	ug/L	<1.0	<1.0	<1.0	<1.0
Dibenzo (a,h) anthracene	ug/L	<1.0	<1.0	<1.0	<1.0
Benzo (g,h,i) perylene	ug/L	<1.0	<1.0	<1.0	<1.0
Dibenzofuran	ug/L	<1.0	<1.0	<1.0	<1.0
Copper	ug/L	<2	3	2	<2

## NOTES:

&lt; = denotes less than method reporting limit

Data summary preped by Stella Jones Corp.

TABLE 6: GROUNDWATER SAMPLE ANALYTICAL RESULTS

PARAMETER	Parcel and/or Sample Location/Description Date Sample Collected Field Sample Number Lab Reference Number UNITS	Grab sample - Groundwater Feb. 2/07 MW-18 07-2020	Grab sample - Groundwater Jan. 31/07 BXS-4 07-2018	Feb. 7/07 Field Blank 07-2248	Feb. 7/07 Trip Blank 07-2249	Feb. 7/07 Trip Blank 2 07-2250
Pentachlorophenol	ug/L	<0.25	<0.25	N/A	N/A	N/A
2,4,6-Trichlorophenol	ug/L	<0.25	<0.25	N/A	N/A	N/A
2,3,6-Trichlorophenol	ug/L	<0.25	<0.25	N/A	N/A	N/A
2,4,5-Trichlorophenol	ug/L	<0.25	<0.25	N/A	N/A	N/A
2,3,4-Trichlorophenol	ug/L	<0.25	<0.25	N/A	N/A	N/A
2,3,5,6- and 2,3,4,6 Tetrachlorophenol	ug/L	<0.25	<0.25	N/A	N/A	N/A
2,3,4,5-Tetrachlorophenol	ug/L	<0.25	<0.25	N/A	N/A	N/A
Diesel (DRO)	ug/L	<250	<250	N/A	N/A	N/A
Residual Oil (RRO)	ug/L	<500	<500	N/A	N/A	N/A
Gasoline	ug/L	<250	<250	N/A	N/A	N/A
Naphthalene	ug/L	<1.0	<1.0	N/A	N/A	N/A
2-Methylnaphthalene	ug/L	<1.0	<1.0	N/A	N/A	N/A
Acenaphthylene	ug/L	<1.0	<1.0	N/A	N/A	N/A
Acenaphthene	ug/L	<1.0	<1.0	N/A	N/A	N/A
Fluorene	ug/L	<1.0	<1.0	N/A	N/A	N/A
Phenanthrene	ug/L	<1.0	<1.0	N/A	N/A	N/A
Anthracene	ug/L	<1.0	<1.0	N/A	N/A	N/A
Fluoranthene	ug/L	<1.0	<1.0	N/A	N/A	N/A
Pyrene	ug/L	<1.0	<1.0	N/A	N/A	N/A
Benzo (a) anthracene	ug/L	<1.0	<1.0	N/A	N/A	N/A
Chrysene	ug/L	<1.0	<1.0	N/A	N/A	N/A
Benzo (b) fluoranthene	ug/L	<1.0	<1.0	N/A	N/A	N/A
Benzo (k) fluoranthene	ug/L	<1.0	<1.0	N/A	N/A	N/A
Benzo (a) pyrene	ug/L	<1.0	<1.0	N/A	N/A	N/A
Indeno (1,2,3-cd) pyrene	ug/L	<1.0	<1.0	N/A	N/A	N/A
Dibenzo (a,h) anthracene	ug/L	<1.0	<1.0	N/A	N/A	N/A
Benzo (g,h,i) perylene	ug/L	<1.0	<1.0	N/A	N/A	N/A
Dibenzofuran	ug/L	<1.0	<1.0	N/A	N/A	N/A
Copper	ug/L	<2	<2	N/A	N/A	N/A

## NOTES:

&lt; = denotes less than method reporting limit

N/A - not analyzed

Data summary preped by Stella Jones Corp.

TABLE 7: SURFACE SOIL COMPOSITE SAMPLE ANALYTICAL RESULTS

PARAMETER	Parcel and/or Sample Location/Description Date Sample Collected Field Sample Number Lab Reference Number UNITS	Parcel A, Area 1 Composite Feb. 1/07 Area 1 07-2009	Parcel A, Area 2 Composite Feb. 1/07 Area 2 07-2010	Parcel A, Area 3 Composite Feb. 2/07 Area 3 07-2012
Pentachlorophenol	mg/kg	0.46	1.2	2.6
2,4,6-Trichlorophenol	mg/kg	<0.068	<0.068	<0.067
2,3,6-Trichlorophenol	mg/kg	<0.068	<0.068	<0.067
2,4,5-Trichlorophenol	mg/kg	<0.068	<0.068	<0.067
2,3,4-Trichlorophenol	mg/kg	<0.068	<0.068	<0.067
2,3,5,6- and 2,3,4,6 Tetrachlorop	mg/kg	<0.068	<0.068	<0.067
2,3,4,5-Tetrachlorophenol	mg/kg	<0.068	<0.068	<0.067
Diesel (DRO)	mg/kg	<0.068	<0.068	<0.067
Residual Oil (RRO)	mg/kg	40	120	150
Gasoline	mg/kg	150	280	230
Naphthalene	mg/kg	<6.1	<5.8	<5.1
2-Methylnaphthalene	mg/kg	<0.064	<0.064	<0.063
Acenaphthylene	mg/kg	0.048	0.11	<0.063
Acenaphthene	mg/kg	<0.064	<0.064	<0.063
Fluorene	mg/kg	<0.064	0.044	<0.063
Phenanthrene	mg/kg	<0.064	0.036	<0.063
Anthracene	mg/kg	0.045	0.2	<0.063
Fluoranthene	mg/kg	<0.064	<0.064	<0.063
Pyrene	mg/kg	0.039	0.035	<0.063
Benzo (a) anthracene	mg/kg	<0.064	0.13	0.056
Chrysene	mg/kg	<0.064	0.09	<0.063
Benzo (b) fluoranthene	mg/kg	0.047	0.15	0.068
Benzo (k) fluoranthene	mg/kg	<0.064	<0.064	<0.063
Benzo (a) pyrene	mg/kg	<0.064	<0.064	<0.063
Indeno (1,2,3-cd) pyrene	mg/kg	<0.064	0.043	<0.063
Dibenzo (a,h) anthracene	mg/kg	<0.064	<0.064	<0.063
Benzo (g,h,i) perylene	mg/kg	<0.064	<0.064	<0.063
Dibenzofuran	mg/kg	<0.064	0.041	<0.063
Copper	mg/kg	<0.064	<0.064	<0.063
NOTES:		24.1	34.3	32.3

&lt; = denotes less than method reporting limit

Data summary prepared by Stella Jones Corp.

N/A - not analyzed

TABLE 7: SURFACE SOIL COMPOSITE SAMPLE ANALYTICAL RESULTS

PARAMETER	Parcel and/or Sample Location/Description Date Sample Collected Field Sample Number Lab Reference Number UNITS	Parcel A, Area 4 Composite Feb. 1/07 Area 4 07-2011	Parcel B, Area 5 Composite Jan. 30/07 Area 5 Comp 07-1726	Parcel B, Area 6 Composite Feb. 1/07 Area 6 07-2008
Pentachlorophenol	mg/kg	1.8	0.14	0.88
2,4,6-Trichlorophenol	mg/kg	<0.067	<0.069	<0.069
2,3,6-Trichlorophenol	mg/kg	<0.067	<0.069	<0.069
2,4,5-Trichlorophenol	mg/kg	<0.067	<0.069	<0.069
2,3,4-Trichlorophenol	mg/kg	<0.067	<0.069	<0.069
2,3,5,6- and 2,3,4,6 Tetrachlorop	mg/kg	<0.067	<0.069	<0.069
2,3,4,5-Tetrachlorophenol	mg/kg	<0.067	<0.069	<0.069
Diesel (DRO)	mg/kg	99	8.1	32
Residual Oil (RRO)	mg/kg	250	54	83
Gasoline	mg/kg	<5.3	<3.3	<6.0
Naphthalene	mg/kg	<0.064	<0.065	<0.065
2-Methylnaphthalene	mg/kg	<0.064	<0.065	<0.065
Acenaphthylene	mg/kg	<0.064	<0.065	<0.065
Acenaphthene	mg/kg	<0.064	<0.065	<0.065
Fluorene	mg/kg	<0.064	<0.065	<0.065
Phenanthrene	mg/kg	<0.064	<0.065	<0.065
Anthracene	mg/kg	<0.064	<0.065	<0.065
Fluoranthene	mg/kg	0.059	<0.065	<0.065
Pyrene	mg/kg	0.058	<0.065	0.04
Benzo (a) anthracene	mg/kg	<0.064	<0.065	<0.065
Chrysene	mg/kg	0.084	<0.065	0.064
Benzo (b) fluoranthene	mg/kg	0.049	<0.065	0.036
Benzo (k) fluoranthene	mg/kg	0.069	<0.065	0.047
Benzo (a) pyrene	mg/kg	0.036	<0.065	<0.065
Indeno (1,2,3-cd) pyrene	mg/kg	0.05	<0.065	<0.065
Dibenzo (a,h) anthracene	mg/kg	<0.064	<0.065	<0.065
Benzo (g,h,i) perylene	mg/kg	0.059	<0.065	<0.065
Dibenzofuran	mg/kg	<0.064	<0.065	<0.065
Copper	mg/kg	32.3	28.3	29.5

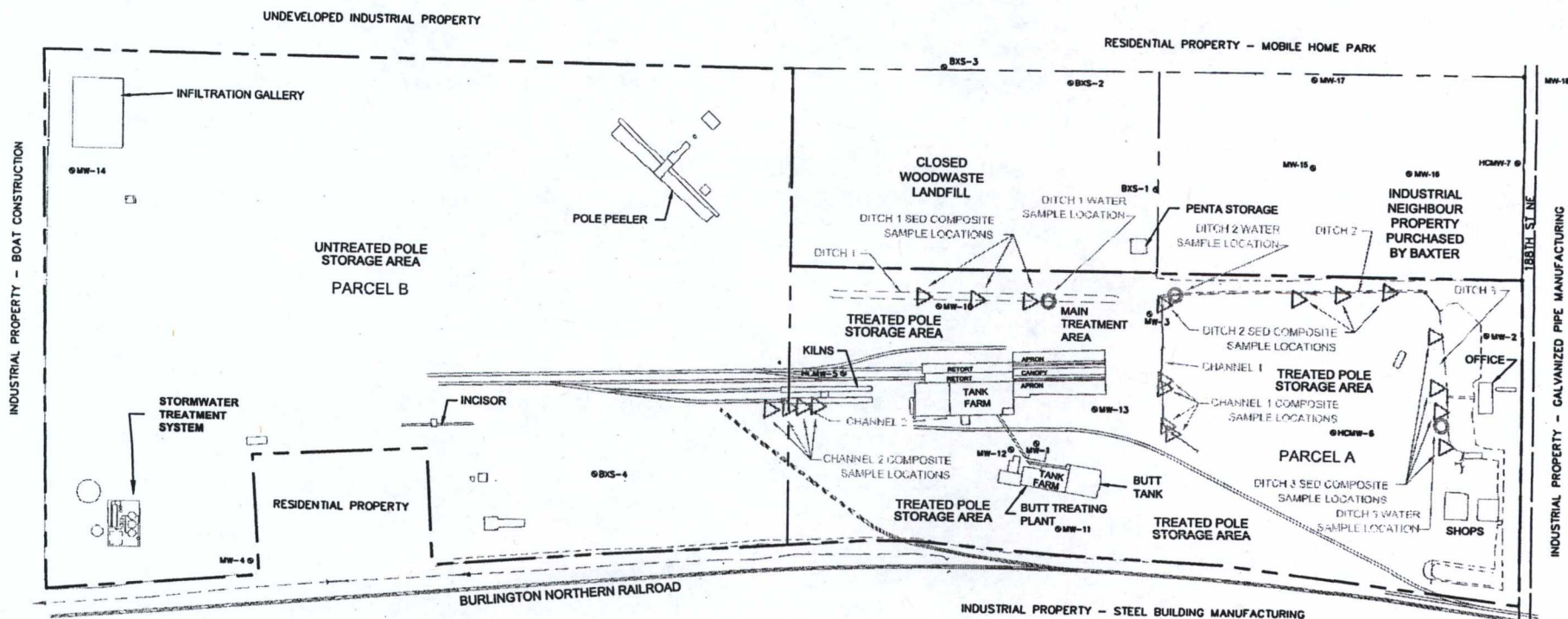
## NOTES:

&lt; = denotes less than method reporting limit

Data summary prepped by Stella Jones Corp.



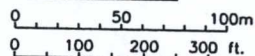
MW-18



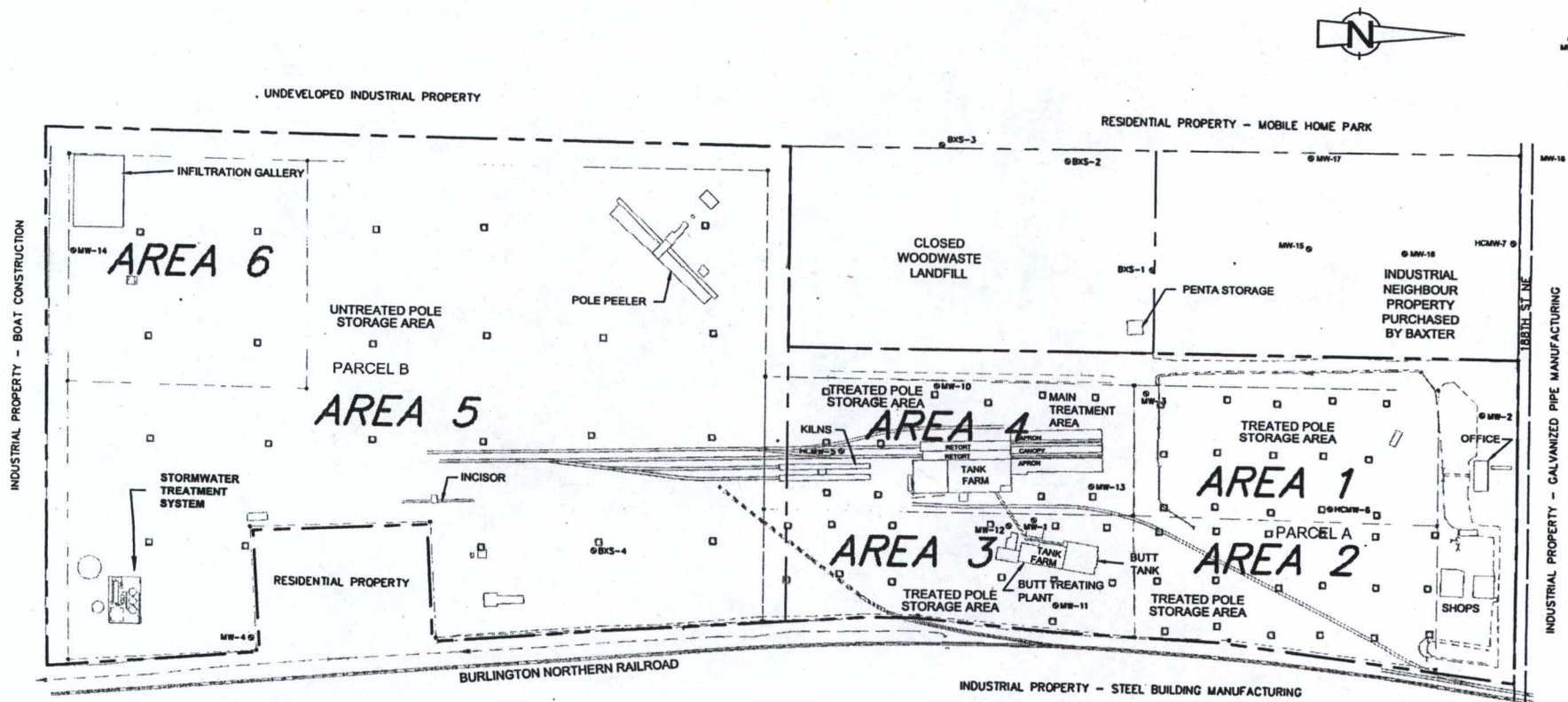
## LEGEND

- APPROXIMATE PROPERTY BOUNDARY - PROPERTY TO BE LEASED BY SJI
- △ SURFACE WATER SAMPLE LOCATION
- ▽ DITCH COMPOSITE SAMPLE LOCATIONS
- ▽ CHANNEL COMPOSITE SAMPLE LOCATIONS

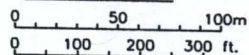
## SCALE:



**DESIGN REFERENCE:** This drawing supplied by Premier Environmental Services Inc., drawing 7026057a.dwg  
**NOTE:** Locations of buildings, underground stations, etc. are for reference only and should not be relied upon for detail design, excavation, or construction purposes.



**SCALE:**



## LEGEND

— — — — — APPROXIMATE PROPERTY BOUNDARY - PROPERTY TO BE LEASED BY SJI

- - - - - COMPOSITE SURFACE SOIL SAMPLE LOCATION BOUNDARY

□ COMPOSITE SURFACE SOIL SAMPLE LOCATIONS

**DRAWING REFERENCE:** Base drawing supplied by Premier Environmental Services Inc., drawing 20260576.dwg  
**NOTE:** Locations of buildings, underground utilities, etc. are for reference only and should not be relied upon for detail design, excavation, or construction purposes.